

CLAIMS:

1. Optical detector system (35) comprising at least two optical detector units (60; 70), each optical detector unit (60; 70) comprising an array (61; 71) of detector segments (62a-d; 72a-d) and at least one output terminal (63a-d; 73a-d) defining a current output of the corresponding optical detector unit (60; 70);
 - 5 wherein at least one current output (63a) of a first optical detector unit (60) is connected directly to a corresponding current output (73a) of a second optical detector unit (70) at an output node (80a).
- 10 2. Optical detector system according to claim 1, wherein the two optical detector units (60; 70) are of mutually identical design.
- 15 3. Optical detector system according to claim 2, wherein the two optical detector units (60; 70) have mutually different wavelength sensitivity ranges.
4. Optical detector system according to claim 2, wherein each current output (63a; 63b; 63c; 63d) of the first optical detector unit (60) is connected directly to the corresponding current output (73a; 73b; 73c; 73d) of the second optical detector unit (70) at a corresponding output node (80a; 80b; 80c; 80d).
- 20 5. Optical detector system according to claim 1, wherein each optical detector unit (60; 70) has a non-operative state in which its outputs (63a-d; 73a-d) are floating and/or present a high input impedance.
- 25 6. Optical detector system according to claim 5, wherein each optical detector unit (60; 70) is in its non-operative state if it does not receive any suitable light.
7. Optical system (30) for a disc drive apparatus (1), comprising:
an optical detector system according to claim 1;

a signal processing circuit (90) having at least one input terminal (91a-d) connected via a line (81a-d) to a corresponding output node (80a-d) of the optical detector system (35).

5 8. Optical system according to claim 7, wherein said at least one input terminal (91a-d) comprises a current input.

9. Optical system according to claim 7, wherein said at least one input terminal (91a-d) comprises a voltage input, and wherein a terminator resistor (82a-d) is connected to 10 said line (81a-d).

10. Optical system according to claim 9, wherein said terminator resistor (82a-d) is arranged in the proximity of said signal processing circuit (90).

15 11. Optical system according to claim 9, wherein said terminator resistor (82a-d) is integrated in an IC implementing said signal processing circuit (90).

12. Optical system (30) for a disc drive apparatus (1), comprising:
light beam generating means (31, 41) for generating at least two light beams
20 (32, 42);
optical components (43, 44, 37, 34) for directing and focusing the light beams (32b, 42b) in a focal spot (F) on an optical disc(2);
an optical detector system (35) according to claim 1;
optical components (34, 37, 33, 45, 46) for directing reflected light beams
25 (32c, 42c; 32d, 42d) to respective optical detector units (60; 70) of the optical detector system (35).

13. Optical system according to claim 12, wherein said optical components (43, 44, 37, 34; 34, 37, 33, 45, 46) are arranged such that said light beams (32, 42) have at least 30 partly common light paths.

14. Optical system according to claim 12, wherein said optical components (43, 44, 37, 34; 34, 37, 33, 45, 46) are arranged such that said light beams (32, 42) have completely separate light paths.

15. Optical unit (130) comprising:
light beam generating means (31) for generating a light beam (32);
optical components (43, 44, 37, 34) for directing and focusing the light beam
5 (32b) in a focal spot (F) on an optical disc(2);
an optical detector unit (60);
optical components (34, 37, 33) for directing a reflected light beam (32c; 32d)
to the optical detector unit (60);
the optical detector unit (60) comprising an array (61) of detector segments
10 (62a-d) and at least one output terminal (63a-d) defining a current output of the optical
detector unit (60).
16. Disc drive apparatus (101), comprising an optical system (30) according to
claim 7 or 12 or an optical detector system (35) according to claim 1.
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17. Disc drive apparatus (101), comprising at least one optical unit (130)
according to claim 15.
18. Disc drive apparatus (101), comprising at least two optical units (130)
20 according to claim 15, wherein at least one current output (63a) of a first optical detector unit
(60) of a first optical unit (130) is connected directly to a corresponding current output (73a)
of a second optical detector unit (70) of a second optical unit (130) at an output node (80a).